

Academic Motivation and Self-Efficacy in Technical Skills as Correlates to Academic Performance



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Abstract

This study aimed to investigate whether significant relationship exists between the affective components of learning such as academic motivation and self-efficacy on demonstrating technical skills among students and their level of academic performance in Exploratory TLE mini-courses. The study is descriptive-correlational in nature, which employed a questionnaire to gather the data. The study found that most of the junior high school respondents were at the approaching proficiency level in terms of dressmaking/tailoring and beauty care services. Meanwhile, most of the respondents were at the proficient level in terms of bread and pastry and production and mechanical drafting. It was also found that a significant relationship exists between students' academic motivation and their performance in both bread and pastry and production and beauty care services mini-courses. Furthermore, there is a significant positive relationship between the respondents' self-efficacy and their academic performance in the four TLE mini-courses covered. Based from the findings, a plan of action on strengthening the integration of affective targets in teaching TLE mini-courses could be recommended.

Keywords:

academic motivation, self-efficacy, technical skills, academic performance

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1. Introduction

Skills represent a key driver of development and growth in the Philippines (OECD, 2017). For a developing country like the Philippines, education and training for productive employment play a crucial role in achieving national development as well as social and economic development (Adeyemo & Schoole, 2015). Along with thinking and behavioral skills, technical skills are deemed essential in successfully securing employment and performing one's job (Diokno & Peprah, 2021). Thus, graduates upon entering the field of work are expected to possess academic and technical skills necessary in order to thrive in this technical and innovation-driven economy.

According to World Bank (2012), technical skills belong to the group of academic skills taught in schools alongside life skills and cognitive skills. It is characterized as the mixture of knowledge and skills required to perform specific jobs. In the Philippines, emphasis on the acquiring of technical skills has always been in the government agenda. In fact, the Republic Act No. 3377, otherwise known as the Vocational Act of 1927 and the Article XIV Section 5, of the 1935 Philippine Constitution provide for the development of vocational efficiency. Moreover, the implementation of the Strengthened Technical and Vocational Education Program (STVEP) in 2007 aimed to prepare secondary-school graduates for certification in vocational and technical skills, university preparation, entrepreneurship and apprenticeship eventually leading to formal employment (Valles, 2012). Relative to this, the current K to 12 curriculum of the Department of Education (DepEd) also highlights the importance of technical and vocational training among graduates of basic education through the offering of Technology and Livelihood Education (TLE).

TLE as a fundamental subject area in the junior high school aims to provide learners with opportunity to develop technical skills by exposing them to experiences and trainings that prepares them in the various field of works (Agdan, 2013). The acquisition and demonstration of these skills are the basic indicators of academic performance in the subject area. The offering of TLE is seen as a response to the need of community to provide young citizens the knowledge and skills necessary in establishing vocational and technological efficiency and problem solving in daily life. Fabico (2015) considers TLE as essential in the education and training of learners and harnessing them as a powerful force in nation building.

In the K to 12 curriculum, TLE is a subject area where learners are taught with the basic skills and concepts of Home Economics, Entrepreneurship, Information and Communication Technology (ICT), and Agricultural Arts as well as Industrial Art, taken as a unified course. The first two years in the junior high school (JHS), called Exploratory courses, serves as preparatory for the demonstration of skills and choosing of specialized area in the last two years of JHS.

However, despite the significance accorded to the training and acquisition of technical skills among learners even in the early stage of schooling, World Bank (2012) data revealed that the Philippines have gaps in producing graduates with high-level of desired skills necessary in the workplace including information technology skills, problem solving

skills and technical skills, among others. Furthermore, in the employment and skills development report of the OECD (2017), looking at the Philippine setting, firms were unavailable to fill job vacancies due primarily to skills-issues such as skills mismatch and even lack of skills. Circumstances like these leads primarily to unemployment. Agluba (2021) looking at the root of the problem in unemployment of over half of the Filipino labor force, came to the idea that this could be related skills mismatch which in turn is related to their preparation during their junior and senior high school years. Interest was also identified as a factor associated to a student's acquisition of technical skills and performance in general.

The educational psychology literature points out that psychological variable possibly play a significant role in academic performance (Zanbuk, 2021). However, in TLE as a subject area, academic success is largely measured in terms of acquisition of technical skills. Thus, this study aims to look particularly to a student's attempt for success called academic motivation and the belief in one's capability to succeed called self-efficacy in the context of the ability to demonstrate the technical skills. This study specifically investigated how these two psychological variables relate to the level of academic performance demonstrated by students in TLE.

Academic motivation refers to learner's internal predisposition which leads to learning, skill attainment and academic achievement (Omidvar, et al., 2013). It could be equated to the interest of an individual learner to engage in the learning experiences offered (Hulleman, et al., 2016). Highly motivated students are expected to make more effort to increase their academic and social achievement in their learning process. It is a highly and significantly correlated to the students' academic achievement (Abdelrahman, 2020). Specifically, it is found that students who were equipped with intrinsic academic motivation can face academic challenges and difficulties with the appropriate flexibility and adaptability and thus are more capable of success on their study.

Another important factor known to influence learner's performance is self-efficacy or one's personal judgement of capability to successfully perform a particular task (Pena, et al., 2015). An individual's self-efficacy was known to influence the amount of effort one gives to a particular learning task (Hartmen, 2021) and the level of persistence when faced with difficulties (Khalique & Singh, 2019). In a subject area such as TLE where learners in the junior high school are expected to demonstrate certain level of skills based on the desired outcome set by the curriculum, it is deemed important that tenacity towards a task and belief in one's capability be examined.

In recognition of the importance of technical skills being the foundation of one's performance in the TLE specialization courses, this study was conceived with the aim of looking into the association between the affective factors influencing the academic performance of Grade 9 students. Specifically, the present study aimed to determine whether affective traits of students, such as academic motivation and self-efficacy in acquiring technical skills, significantly relate to their academic performance in TLE exploratory courses including bread and pastry production, dressmaking/ tailoring, mechanical drafting and beauty care (nail care) services at Recto Memorial National High School (RMNHS).

The results of which may possibly guide TLE exploratory courses teachers in formulating interventions or designing programs that will prepare exploratory learners in pursuing specialized TLE fields in their higher years of study.

2. Literature Review

Technology education refers to educational or learning activities that deal with the development of technical skills, knowledge and attitudes relevant to production or service occupations for effective workers. It also prepares someone for employment in technical work or upgrades persons who are presently employed or engaged in technical work. In the Philippines, the current K to 12 curriculum clearly delineates the need for skills acquisition among Filipino students such as media, information and technology skills (DepEd, 2019). Accordingly, the curriculum aims to develop globally competitive, productive and responsible citizen equipped with essential competencies, technical skill and values for both lifelong learning and employment through the eight basic learning areas, one of which is TLE.

The offering of Technology and Livelihood Education (TLE) in the junior secondary school as means to develop technical and vocational skills is not a new concept. In fact, the enactment of RA 7796, otherwise known as Technical Education and Skills Development Authority Act of 1994, emphasized the teaching and learning of technical education and skills development in response to the challenge of the dynamic demand for quality middle-level manpower. However, with the offering of TLE in the junior high school level, the important role played by the technical and vocational education in attaining national development goals was highlighted. TLE generally includes the basic skills and concepts of home economics, entrepreneurship, information and communication technology (ICT), and agricultural arts as well as industrial art (Agluba, 2021). It is offered as an exploratory subject for lower secondary school particularly in Grades 7 and Grade 8. This course introduces the different mini-courses and learning activities, which will prepare the students to be skillful and competitive before they take the specialization course in Grade 9 and 10. These areas of TLE are fundamentals for technical-vocational courses to be taken in the senior high school where they are expected to undergo training and assessment to evaluate their performance in their field of specialization and to acquire certificate of competency (TESDA, 2012). In the secondary education curriculum, TLE has different components including: home economics, agri-fishery, arts, industrial arts and information and communication technology. According to Gregorio (2016), taking these courses of TLE could be helpful in responding to the need for industry workforce and possibly, lessen the job mismatch in the country.

There are two types of curriculum provided in the present K to 12 curriculum of the DepEd such as technical-vocational education-based TLE and entrepreneurship education-based TLE (Espiritu, 2020). The present study's locale, RMNHS is offering the technical-

vocational education-based TLE, which is focused on technical skills development in various areas. It has five common competencies, based on the training regulations of the Technical Education and Skills Development Authority (TESDA), which are covered in the exploratory phase (Grades 7 and 8): mensuration and calculation, technical drafting, use of tools and equipment, maintenance of tools and equipment and occupational health and safety. Students can choose a maximum of four TLE mini courses in Grade 7 and another four in Grade 8. However, the specialization offered in Grades 9-10 were based from the school's needs assessment for the offering per locality with special consideration on the needs of the community and schools' resources.

Academic performance of student in secondary schools refers to the extent to which a student, a teacher, or an institution has achieved their educational goals (Zambuk, 2021). In a skill-based course such as TLE, skills acquisition in the identified areas serves as the measure of achievement or performance. On the other hand, academic performance serves as benchmark in order to determine the result of student attainment of set goals. Mushtaq and Khan (2012) identified some factors affecting student's achievement like learning facilities, communication, proper guidance and family stress. In addition, Calixto (2015) identified factors including student-related, faculty-related and program-related factors. The current study however specifically looked into the student-related factors identified as self-efficacy in demonstrating skills and the academic motivation of the learners.

According to Bandura (1986), perceived self-efficacy is defined as people's judgments of their capabilities to organize and executive courses of action required attaining designated types of performances. This implies that the level of self-efficacy will influence a learner's perception of difficulty of an academic task. A learner with lower self-efficacy may see academic tasks as difficult compared to those with high self-efficacy. Khan and Bhatt (2021) describe self-efficacy as one's confidence or the optimistic belief to one's competence or chances of success. This could be demonstrated in such academic success level in accomplishing academic task or demonstrating technical skills in the case of TLE. In social cognitive theory, people's sense of personal efficacy to exercise some control over events that affect their life is considered to be the most influential aspect of self-knowledge, and a key element in the exercise of control and personal agency. Self-efficacy plays a major role in determining chances for success (Khan & Bhatt, 2021) as it serves as one's judgments of their capabilities to organize and execute courses of action required in attaining desired learning outcomes or demonstrating performances.

Another factor considered in this study was academic motivation. Amrai, et al., (2011) stated that motivation for academic achievement is of great importance because it is the force that pushes a person or student to successfully complete assigned tasks, perform an activity, complete the assignment, achieve set goals, or pass examinations. According to Viarri, et al. (2011), academic motivation is one of the effective factors of students' performance. It is a force that directs and sustains behavior towards an attainment of goal (Eymur & Geban, 2011).

The Self-Determination Theory (SDT) proposed by Deci and Ryan (1985) outlines the three types of motivation particularly as predictor of performance. This includes intrinsic or being motivated by the feeling of enjoyment or competence one feels toward the task engagement; extrinsic or the motivation one derive from the perceived usefulness of the task to one's future goal; and, a-motivation where an individual has no discernment of connection between the actions towards and the outcomes of the task. Consequently, academic motivation defines the reasons behind students' actions and behavior in school thus greatly influencing the achievement of desired outcome. Motivated students tend to behave energetically and are goal oriented. Though researches have established that academic motivation could likely influence the level of academic achievement in general (Sturges, 2016; Mohammadi, et al., 2021; Zambuk, 2021), few studies particularly looking into the academic motivation in the context of the teaching and learning process in TLE is seldom found in the literature.

3. Methodology

This study is descriptive-correlational and cross sectional in nature. It utilized the descriptive survey method, which involves collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2005). According to Ariola (2006) descriptive survey research attempts to analyze, interpret, and report the present state of the subject matter or problem. It deals with the cross-section of the present time and uses the questionnaire or other instruments to gather data. The study is correlational in the sense that it tries to determine whether a significant relationship exists between the independent and the dependent variables of the study. Since the data in the study were collected from the respondents during a single point and relatively brief period, it is cross sectional in terms of time dimension.

The respondents of the study were 200 randomly chosen Grade 9 students who were completers of TLE exploratory courses. The respondents selected were informed through a letter attached in the survey questionnaires. The researcher-adapted questionnaire was composed of three parts. The first part includes the respondents' perception on their academic motivation in TLE, the second consists of self-efficacy in acquiring technical skills in TLE exploratory courses and finally, the students' academic performance.

The data gathered were tallied, tabulated and analyzed. In analyzing and interpreting the information gathered, descriptive and inferential statistics were employed. To determine the students' perception on their self-efficacy and academic motivation, mean and standard deviation were used while the performance of the respondents was described using the frequency counts, percent, mean and standard deviation. Inferential statistics such as the Person product moment correlation coefficient (Pearson r) was used to determine whether a significant relationship exist between the independent variables, self-efficacy and academic motivation, and the dependent variable, the student's performance.

4. Results and Discussion

Table 1
Respondents' Perceived Academic Motivation in TLE Exploratory Courses

| Indicators | M | SD | VI |
|---|-------------|-------------|----------|
| <i>I attend TLE class....</i> | | | |
| 1. because I experience satisfaction while learning new things | 4.11 | 0.8 | A |
| 2. for the pleasure I experience when I learn to do new things I've never done before | 4.01 | 0.74 | A |
| 3. for the pleasure that I experience in when I learn more about TLE topics which I really like | 3.99 | 0.83 | A |
| 4. because my TLE class helps me to continue to learn about many things that interest me | 4.07 | 0.92 | A |
| 5. for the pleasure I experience while surpassing myself in my studies | 3.64 | 0.86 | A |
| 6. for the pleasure that I experience while I am surpassing myself in one of my personal accomplishments | 3.7 | 0.74 | A |
| 7. for the satisfaction I feel when I am doing difficult academic activities in TLE | 3.42 | 0.78 | A |
| 8. because TLE class allows me to experience a personal satisfaction in my quest for excellence in my studies | 3.81 | 0.86 | A |
| 9. because I really like going to school and attending TLE class | 3.9 | 0.78 | A |
| 10. because for me, TLE class is fun | 3.92 | 0.88 | A |
| 11. for the pleasure that I experience when I enjoy the discussions with interesting teachers | 3.83 | 0.92 | A |
| 12. for the feeling of enjoyment that I experience while reading about different interesting topics in TLE. | 3.72 | 0.84 | A |
| 13. because I think that a learning from TLE class will help me better prepare for the career I will choose in the future | 4.13 | 0.9 | A |
| 14. because eventually it will help me to have job in a field that I like | 3.89 | 0.87 | A |
| 15. because this will help me make a better choice regarding my career orientation | 3.78 | 0.93 | A |
| 16. because I want to show myself that I can succeed in my studies | 4.05 | 0.84 | A |
| 17. to prove to myself that I am capable of completing my high-school subjects | 3.93 | 0.88 | A |
| 18. because when I succeed in my subjects, I feel important | 3.95 | 0.93 | A |
| 19. to show myself that I am an intelligent person | 3.67 | 0.91 | A |
| 20. because I want to show myself that I can succeed in the subject | 4.01 | 0.88 | A |
| 21. because I need to pass this subject and graduate in order to find a high-paying job later on. | 3.88 | 0.97 | A |
| 22. in order to have a more prestigious job later on | 3.78 | 0.89 | A |
| 23. because I want to have 'the good life' later on | 4.11 | 1 | A |
| 24. in order to have a better salary later on | 3.86 | 0.95 | A |
| 25. I'm not sure, but I really feel that it was worth my time | 2.75 | 1.19 | MA |
| 26. I just think I should continue attending TLE classes | 2.95 | 1.16 | MA |
| 27. I can't see why I go to school; I just feel like I need to attend | 2.77 | 1.12 | MA |
| 28. I don't know; I just feel like I want to attend TLE classes | 2.67 | 1.18 | MA |
| Overall Mean | 3.67 | 0.39 | A |

Legend: 4.21 -5.00 Strongly agree (SA); 3.41 - 4.20 Agree (A); 2.61 – 3.40 Moderately agree (MA); 1.81 – 2.60 Disagree (D); 1.00 – 1.80 Strongly Disagree (SD)

Table 1 provides the respondents' perceived academic motivation in TLE exploratory courses including bread and pastry production, dressmaking/ tailoring, mechanical drafting and beauty care (nail care) services. It was found in the study that the respondents express agreement on most of the statement indicating academic motivation towards learning TLE particularly expressing their desire to attend TLE classes because of the perceived importance it may contribute to their future career and having a "good" life in the future. This was evident in indicators with highest agreement including statement "*I attend TLE*

classes because I think that a learning from TLE class will help me better prepare for the career I will choose in the future” (mean=4.13, SD=0.90) and *“I attend TLE classes because I want to have a good life later on”* (mean=4.11, SD=1.00).

The table further reveals that students’ academic motivation to attend classes and learn TLE concepts were also derived from the pleasure they experience when they are able to learn to do new things and acquire new skills. This may be supported by the nature of exploratory courses contents, which introduce the students to different technical skills ranging from baking, dressmaking and tailoring, drafting and nail care servicing. These skills in turn are by nature relating to having technical skills they can use to earn a living either by producing goods (bread, pastry, food products), providing services (nail care, draftsmanship services, dressmaking) or by putting up a business that offers these services such as a parlor, a bakery or a garment shop. This thought is supported by Alsong and Alsong (2019) who stated that TLE subject could give the students opportunity to earn a living as they can apply their acquired skills and knowledge in providing services where they can earn, or by landing a job relevant to their skills specialization or even putting up a small business. They can venture into commercial cooking, apply as sewer in a factory or engage in a micro business.

Similar to the pointed statement with highest mean perception, Aguilana (2019) noted that TLE being a skill-oriented subject is significant in educating and preparing students for aspects of family living including those that will provide students with academic and vocational training necessary in achieving success in one’s future career. Likewise, it was pointed out that students are generally motivated to study TLE since the trainings offered in subject could be a possible source of livelihood and entrepreneurship opportunities. As Tan (2021) described, TLE prepares high school students by providing them the knowledge and skills useful in becoming a productive citizen and one who can economically support himself or his family by earning a living early should the possibility of tertiary education becomes unavailable.

Overall, the study establishes that respondent-students in exploratory TLE have high level of academic motivation towards TLE exploratory mini-courses since they agree on most of the statements pertaining to willingness to attend TLE classes having an overall mean of 3.67 (SD=0.39). This study therefore shows that respondents perceived the exploratory course to be instrumental in landing relevant job in the future thus making them academically motivated to attend classes and acquire the knowledge and skills offered in the mini-courses.

Based from Table 2, it is found that students in exploratory TLE who served as respondents have a high level of self-efficacy in demonstrating the technical skills in bread and pastry mini-course. This was shown by the overall agreement of 3.73 (SD=0.58) to the indicators showing their belief that they can successfully acquire specific skills and competencies of the mini-course. Specifically, students have high self-efficacy on successfully preparing tools and equipment in baking, checking the conditions of these tools, measuring both dry and liquid ingredients accurately and maintaining occupational health

and safety in baking. Self-efficacy beliefs determine one's feeling, thinking, behavior and even motivation.

Table 2

Respondents' self-efficacy in acquiring technical skills as to Bread and Pastry Production

| Indicator | M | SD | VI |
|---|-------------|-------------|-----------|
| <i>I believe that I can successfully...</i> | | | |
| 1. prepare tools and equipment for specific baking purposes. | 3.91 | 0.80 | A |
| 2. familiarize oneself with the table of weights and measures in baking. | 3.75 | 0.84 | A |
| 3. apply basic mathematical operations in calculating weights and measures. | 3.64 | 0.89 | A |
| 4. measure dry and liquid ingredients accurately. | 3.82 | 0.89 | A |
| 5. check condition of tools and equipment. | 3.81 | 0.93 | A |
| 6. perform basic preventive measure. | 3.74 | 0.81 | A |
| 7. store tools and equipment properly. | 3.77 | 1.00 | A |
| 8. identify and evaluate hazards and risks. | 3.43 | 0.92 | A |
| 9. control hazards and risks. | 3.42 | 0.95 | A |
| 10. maintain occupational health and safety awareness. | 3.97 | 0.87 | A |
| Overall | 3.73 | 0.58 | A |

Legend: 4.21 -5.00 Strongly agree (SA); 3.41 - 4.20 Agree (A); 2.61 – 3.40 Moderately agree (MA); 1.81 – 2.60 Disagree (D); 1.00 – 1.80 Strongly Disagree (SD)

Overall, the respondents view their self-efficacy or their ability to successfully demonstrate technical skills or accomplish task that demonstrate these skills, to be positive since they agree on all of the statements indicating the sub-competencies of bread and pastry production. Taking from Bandura's (1994) definition, it can be derived that one's perception of self-efficacy is the belief one has about their ability and capability to do something or produce designated levels of performance. In this study

Table 3

Respondents' self-efficacy in acquiring technical skills as to Dressmaking/Tailoring

| Indicator | M | SD | VI |
|--|-------------|-------------|-----------|
| <i>I believe I can successfully...</i> | | | |
| 1. identify sewing tools and equipment and their uses | 3.81 | 0.94 | A |
| 2. identify the types of sewing machine and its parts. | 3.56 | 0.88 | A |
| 3. obtain body measurements | 3.45 | 0.91 | A |
| 4. perform simple calculations | 3.54 | 1.01 | A |
| 5. estimate appropriate quantities | 3.43 | 0.88 | A |
| 6. sketch simple project design | 3.40 | 1.12 | MA |
| 7. produce simple project | 3.36 | 1.01 | MA |
| 8. operate machine and assess its performance | 3.06 | 1.06 | MA |
| 9. clean and lubricate machine | 3.18 | 1.02 | MA |
| 10. identify and evaluate hazards and risks | 3.33 | 0.96 | MA |
| Overall | 3.41 | 0.65 | MA |

Legend: 4.21 -5.00 Strongly agree (SA); 3.41 - 4.20 Agree (A); 2.61 – 3.40 Moderately agree (MA); 1.81 – 2.60 Disagree (D); 1.00 – 1.80 Strongly Disagree (SD)

Table 3 presents the respondents' perceived self-efficacy in acquiring technical skills as to dressmaking/tailoring. Based from the results of the study, the respondents have a

moderate level of efficacy as shown by the overall agreement of 3.41 (SD=0.65) to the indicators showing the competencies in dressmaking/tailoring. Though most of the respondents perceived their capability to identify sewing tools and equipment and their respective uses, they have a low self-efficacy when it comes to producing simple projects in dressmaking and operating the sewing machines including the assessment of the machine's performance. This may be due to the nature of the exploratory course being more focused on introducing the concepts and establishing understanding of the procedures rather than giving students the opportunity to practice the skills hands-on. Likewise, their moderate self-efficacy may have stemmed from their lack of exposure to the equipment (sewing machine) and opportunity to use and manipulate them since there is only limited equipment available in the classroom. Overall, the respondents could be described as having moderate self-efficacy towards the acquisition of the skills and competencies in exploratory dressmaking/tailoring mini-course.

Table 4

Respondents' self-efficacy in acquiring technical skills as to Mechanical Drafting

| <i>I believe I can successfully...</i> | Indicator | M | SD | VI |
|--|---|-------------|-------------|-----------|
| 1. | identify drafting materials and tools/drawing instruments applicable to a specific job. | 3.53 | 1.02 | A |
| 2. | request, receive and inspect drafting materials and tools | 3.44 | 0.90 | A |
| 3. | manipulate T-square and Triangle. | 3.24 | 0.97 | MA |
| 4. | select and use measuring instruments | 3.18 | 0.96 | MA |
| 5. | clean and store measuring instruments | 3.16 | 0.90 | MA |
| 6. | convert fraction to decimal and vice versa | 3.28 | 0.95 | MA |
| 7. | convert English and Metric measurement vice versa | 2.99 | 1.00 | MA |
| 8. | identify assembly and detailed drawing | 3.24 | 0.94 | MA |
| 9. | identify hazardous area | 3.23 | 1.00 | MA |
| 10. | use personal protective clothing and devices | 3.56 | 1.00 | A |
| Overall | | 3.28 | 0.69 | MA |

Legend: 4.21 -5.00 Strongly agree (SA); 3.41 - 4.20 Agree (A); 2.61 – 3.40 Moderately agree (MA); 1.81 – 2.60 Disagree (D); 1.00 – 1.80 Strongly Disagree (SD)

A moderate level of self-efficacy was found among the respondents in terms of acquiring technical skills in mechanical drafting. It could be derived from Table 4 that only three indicators were shown to be perceived by the respondents to have high level of efficacy (agree), “*I believe I can use personal protective clothing and devices*”, “*identify drawing tools/materials needed in particular job and request*”, “*receive and inspect drafting materials and tools*”. Notably, respondents have a low self-efficacy in terms of their ability to convert English and Metric measurement and vice versa which had the lowest mean of 2.99 (SD=1.0) interpreted as moderately agree. Furthermore, indicators pertaining to performing basic mensuration and calculation (indicators 4-7) also had low mean agreement on the successful acquisition of the given outcomes, which reflects moderate self-efficacy level.

Overall, the respondents can be described as having moderate efficacy in terms of their belief to successfully acquire the outcomes and competencies in mechanical drafting.

Table 5

Respondents' self-efficacy in acquiring technical skills as to Beauty Care (Nail Care) Services

| Indicator | M | SD | VI |
|---|-------------|-------------|-----------|
| <i>I believe I can successfully...</i> | | | |
| 1. prepare the necessary tools and equipment for the specific nail care activity. | 4.19 | 0.89 | A |
| 2. use the nail care tools and equipment. | 4.11 | 0.92 | A |
| 3. perform sterilization of nail care tools. | 3.91 | 0.95 | A |
| 4. perform basic preventive and corrective maintenance. | 3.72 | 1.02 | A |
| 5. store nail care tools and equipment. | 3.86 | 0.87 | A |
| 6. identify hazards and risks. | 3.52 | 0.92 | A |
| 7. evaluate hazards and risks. | 3.41 | 1.03 | A |
| 8. control hazard and risks. | 3.50 | 0.99 | A |
| 9. identify nail structure, shapes and nail diseases/disorders. | 3.65 | 1.03 | A |
| 10. create basic nail designs. | 3.79 | 1.07 | A |
| Overall | 3.77 | 0.73 | A |

Legend: 4.21 -5.00 Strongly agree (SA); 3.41 - 4.20 Agree (A); 2.61 – 3.40 Moderately agree (MA); 1.81 – 2.60 Disagree (D); 1.00 – 1.80 Strongly Disagree (SD)

In terms of the respondents' perception on their self-efficacy in acquiring technical skills as to beauty care services, the study found a high level of self-efficacy. This was particularly evident in indicators pertaining to the preparation and use of tools and equipment for specific nail care activity. It could be seen from Table 5 that the highest perception of self-efficacy was recorded in statement 1, “*prepare the necessary tools and equipment for the specific nail care activity*” (mean=4.19, SD=0.89) while the lowest recorded mean was statement 7, “*evaluate hazards and risks*”. Nevertheless, the respondents generally perceived their self-efficacy towards skills acquisition in beauty care services to be high as shown by their agreement on all of the outcomes reflected in the ten indicators of competencies. This therefore shows their belief in their capacity or ability to succeed in the TLE mini-course beauty care (nail care) services.

Table 6

Respondents' Academic Performance in TLE Exploratory Courses

| Proficiency Level | BPP | % | DT | % | MD | % | BCS | % |
|---------------------------------|------------|----------|-----------|----------|-----------|----------|------------|----------|
| Developing (79-75) | 10 | 5 | 62 | 31 | 44 | 22 | 38 | 19 |
| Approaching Proficiency (84-80) | 54 | 27 | 76 | 38 | 82 | 41 | 58 | 29 |
| Proficient (89-85) | 78 | 39 | 30 | 15 | 54 | 27 | 62 | 31 |
| Advanced (100-90) | 58 | 29 | 32 | 16 | 20 | 10 | 42 | 21 |

Legend: BPP-Bread and Pastry Production; DT-Dressmaking/Tailoring; MD-Mechanical Drafting; BCS-Beauty Care Services

Table 6 presents the distribution of the respondents in terms of academic performance in TLE exploratory courses. As to the performance in the bread and pastry mini-course, the study found that most of the respondents (39%) were at the Proficient (P) level with grades ranging from 85-89, followed by 29% at the Advanced (A) level with grades ranging from

90-100. In terms of beauty care services (nail care) mini-course, most of the respondents (31%) were at the Proficient (P) level followed by 29% at the Approaching Proficiency (AP) level. There are also a high number of students reaching the Advanced (A) level with 21%.

On the other hand, the respondents were generally at the Approaching Proficiency level (AP) in both dressmaking/ tailoring and mechanical drafting mini-courses. Specifically, majority of the respondents in dressmaking and tailoring have grades ranging from 80-84 for Approaching Proficiency (AP) level and 75-79 for Developing (D) level. Only 38% reached Approaching Proficiency (AP) while 31% were only at the Developing (D) level. Only 16% of the respondents were able to reach the Advanced (A) level in this mini-course.

Mechanical drafting mini-course also registered a relatively low academic performance as revealed by the gathered data. Majority of the respondents (41%) were at the Approaching Proficiency (AP) level with grades ranging from 80 to 84. Only 10% of the respondents reached the advanced level or had rating of 90 or higher while also a large portion, 22% were still at the Developing (D) level.

Though academic performance is commonly measured by examinations or continuous assessment, there is no general agreement on how it is best tested or which aspects are the most important as it depends on the nature of the subject areas usually dictated by the curriculum being enforced. Similarly, assessment of learning depends on the purpose of the assessor so there is no permanent or exact tool to be used and it varies on the usability and appropriateness of its goals and objectives (Alsong & Alsong, 2019). Nevertheless, it is a general belief that academic performance is one of the top priorities for schools being the best indicator of the extent by which a student, a teacher, or an educational institution has achieved the set learning outcomes (Firouzeh, 2013). In the case of TLE as a subject area, academic performance is generally associated to acquiring certain level of knowledge of and competence in demonstrating technical skills. The present TLE subject of the K to 12 Curriculum is clear in its aim of equipping students with the knowledge and skills requisite to developing life-long learners who are prepared for tertiary education, mid-level skills development, employers and entrepreneurship and an individual who is capable of improving one's quality of life (DepEd 2012). In this study, the respondents are characterized to be in the process of acquiring mastery based from the data revealing that most are in the Approaching Proficiency and Proficient level in terms of achieving the learning outcomes for TLE.

Table 7

Test of relationship between respondents perceived academic motivation and academic performance

| Mini-Course | r-value | p-value | Remarks |
|---------------------------|---------|---------|-----------------|
| Bread & Pastry Production | .231* | .021 | Significant |
| Dressmaking/ Tailoring | .182 | .070 | Not significant |
| Mechanical Drafting | .065 | .519 | Not significant |
| Beauty Care Services | .298** | .003 | Significant |

*Legend: *significant $p \leq 0.05$, ** significant $p \leq 0.01$*

Presented in Table 7 is the test of relationship between respondents' perceived level of academic motivation and their academic performance in TLE exploratory courses bread and pastry production, dressmaking/ tailoring, mechanical drafting and beauty care (nail care) services. The results revealed that there is a significant positive relationship between students' academic motivation and their performance in both bread and pastry and production and beauty care services mini-courses ($p < .05$), .021 and .003, respectively. On the other hand, no significant relationship was found between students' motivation in dressmaking/tailoring and mechanical drafting and their performance in corresponding TLE exploratory course, p values 0.070 and 0.519, respectively.

This indicates that as students become academically motivated, there will likely be a raise in academic performance in TLE exploratory course. This is specifically indicative of the results gathered in the case of bread and pastry production and beauty care services. This study shows that the respondents were characterized as having a high level of academic motivation towards studying TLE. Taking on the view of Steinmayr, et al. (2019) that motivation could contribute greatly to students working towards better performance in the subject being taken as it renews and directs student behavior, it implies that academic motivation demonstrated by the students plays an important role in forecasting their future success or failure. Since students with low level of motivation are not propelled to succeed, they are less likely to engage in the learning task especially when confronted with difficulties. Motivation affects students' learning, perseverance, and scholarly achievement (Zanbuk, 2021). It generally plays a crucial role in determining academic performance among secondary school students (Aniruddha & Pranab, 2019). It is linked to how students feel towards the work they do whether on completing seatwork, working on assignments or participation in class demonstrations. Unless students attain a certain level of motivation, teaching and learning success might be difficult to attain.

Academic motivation has been described in the literature to be an important factor and requirements for learning (Uyulgan and Akkuzu, 2014). This gives the students the strength and direction to their behavior, thus giving them the energy to perform activities or pursue desired goals. It is therefore important that both the teachers and the students should have a clear understanding of the prevailing level of motivation in the learning environment.

This may be the part where teachers can intervene. By incorporating into TLE lessons the importance of learning the TLE skills and competencies and how these can be used in the future jobs, academic motivation may be enhanced thereby enhancing academic performance. Furthermore, offering challenging activities that requires learning new skills may also produce satisfaction from students derived from their accomplishment may also help them, as they will appreciate more the importance of attending TLE classes. Generally, it may imply that by enhancing students' academic motivation, they may be helped to perform better in the subject area.

Table 8*Test of relationship between respondents' self-efficacy in acquiring technical skills and academic performance*

| Exploratory Course | r-value | p-value | Remarks |
|---------------------------|----------------|----------------|----------------|
| Bread & Pastry Production | .780** | .000 | Significant |
| Dressmaking/ Tailoring | .645** | .000 | Significant |
| Mechanical Drafting | .561** | .000 | Significant |
| Beauty Care Services | .711** | .000 | Significant |

*Legend: *significant $p \leq 0.05$, ** significant $p \leq 0.01$*

Self-efficacy in acquiring technical skills and the academic performance of students in TLE exploratory courses were found to be significantly related. Self-efficacy, in this study being the belief in the ability to succeed in acquiring technical skills specific for each mini-course, were all positively related to students' academic performance as shown in Table 8. This means that the higher the level of self-efficacy of the students, the greater the chance they may succeed in the TLE mini-courses. This association is possible as self-efficacy is also described as the conviction to one's ability to realize an objective or achieve a result. It can therefore influence the amount of effort one exerts in doing a particular task or learning activity. Self-efficacy being a judgement of one's capability, students who sees himself or herself capable of demonstrating a skill will likely to persist in performing the task with competence despite the difficulties therefore leading to a greater chance of school success.

The present findings are also supported by various studies (Baanu, Oyelekan, & Olorundare, 2016; Honicke & Broadbent, 2016) which established that a significant relationship exists between students' self-efficacy and academic performance. Furthermore, academic self-efficacy is also considered as the best predictor of performance among high school students (Firouzeh, 2013). From this, the teachers may therefore consider strengthening affective competency targets in the teaching of TLE contents since this domain plays a crucial part in the students' academic success and school performance in general. In a highly skill-based and performance-based subject such as TLE, persistence among students plays a crucial role in achieving success, which could be attained with one's self-efficacy being high. This is also parallel to the claims of Khalique and Singh (2019) saying that for a student to be resilient and persistent in the face of difficulties encountered in the learning process, one should have a high level of self-efficacy for a given task. Consequently, students who demonstrate low level of self-efficacy may tend to disengage with the learning process or avoid the situation resulting to a lower level of performance.

Based from the aforementioned discussion, it could be derived that self-efficacious beliefs in one's ability to demonstrate technical skills should be equally given priority in the teaching of TLE. Along with other factors of learning, self-efficacy should be imparted and habituated to students through the employment of varied teaching techniques and appropriate approaches to learning.

5. Conclusion

In general, the present study showed that the students in the TLE exploratory courses generally did not reach the advanced level of proficiency in their academic performance. Most of them are at the proficient (P) level in terms of their academic performance in bread and pastry production and beauty care services while at the approaching proficiency (AP) in terms of mini-courses dressmaking/tailoring and mechanical drafting. Affective component of learning, academic motivation, positively relates to academic performance. Likewise, a significant positive relationship exists between student's self-efficacy on acquiring technical skills and their academic performance in the four mini courses in TLE exploratory courses. According to this point, an improvement in students' affective domains, academic motivation and self-efficacy will also result to improvement in students' academic achievement.

Although the findings of the study showed a significant relationship between affective components, self-efficacy and academic motivation, and academic performance of students in the four TLE mini-courses, the results may be further supported with longitudinal studies, which may allow for more in-depth understanding. Further, since academic motivation and self-efficacy were found to be significantly related to academic performance in TLE, test of these variables as predictors, as well as their interplay with other affective components of learning such as interests, values and attitudes, may as well be explored.

Based from the findings of the study, it may as well be recommended that future researches can be done investigating other factors that may help students raise their proficiency level in the mini-courses in TLE especially in dressmaking/tailoring and mechanical drafting since these mini-courses registered a low level of academic performance. Since this study found that the respondents from the locale only had moderate efficacy on acquiring the outcomes in mechanical drafting, further investigation may be done specifically on this mini-course where intervention could be derived.

Finally, having shown that there is a significant positive relationship between both the respondents' perceived academic motivation and self-efficacy in their acquisition of technical skills in TLE and their academic performance, a plan of action on strengthening the integration of affective targets in teaching TLE mini-courses such as bread and pastry production, dressmaking/ tailoring, mechanical drafting and beauty care (nail care) services can also be considered.

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